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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kenichiro Yamauchi

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EXAMINER

CHIO, TAT CHI

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/809,379	Applicant(s) YAMAUCHI, KENICHIRO	
	Examiner TAT CHI CHIO	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 6, 8-16 and 19-22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/1/2004 and 7/8/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenihan et al. (US 6,169,843 B1) in view of Svanbro et al. (US 6,680,921 B1) and Ohara et al. (US 2001/0041060 A1).

Consider claim 1, Lenihan et al. teach An image reproduction apparatus including an ATS generation unit, an ATS multiplexing unit, channel reproduction units, a reproduction ATS generation unit, a reproduction timing generation unit, and a multiplexing unit, wherein a MPEG transport stream is inputted to the ATS generation unit and the ATS multiplexing unit (transport stream input in Fig. 3A), the ATS generation unit detects a PCR value in the input MPEG transport stream (col. 3, lines 9-11), and outputs an Arrived Time Stamp (ATS) to the ATS multiplexing unit, the ATS multiplexing unit multiplexes the Arrived Time Stamp and the input MPEG transport stream (325 of Fig. 3A), and stores the multiplexed data in a storage medium (230 of Fig. 3A), the channel reproduction units each include a PID filter, a buffer, a packet rewriting unit, an ATS detection unit, and a PTS-DTS detection unit, the PID filter extracts a MPEG transport stream having a PID that is to be reproduced from the storage medium (col. 7, lines 15-25), and outputs the extracted MPEG transport stream

Art Unit: 2621

to the buffer and the PTS-DTS detection unit, the buffer outputs a MPEG transport stream to the packet rewriting unit in accordance with a control of the multiplexing unit (230 of Fig. 3A stores the PID information), the packet rewriting unit rewrites a time that is indicated by an ATS counter, which is outputted from the reproduction timing generation unit, as PCR, and outputs the rewritten PCR (col. 11, lines 33-38), the ATS detection unit reads an initial value of the ATS that is multiplexed in the MPEG transport stream which is read from the storage medium, and outputs the initial value to the reproduction ATS generation unit (col. 11, lines 55-57 and col. 12, lines 11-16), the PTS-DTS detection unit detects PTS and DTS in the input MPEG transport stream, and outputs the PTS and DTS values to the reproduction timing generation unit (col. 13, lines 16-20), the reproduction timing generation unit generates timing of multiplexing of the MPEG transport stream that is outputted from the channel reproduction unit, and outputs the generated timing to the multiplexing unit (col. 8, lines 21-32), and the multiplexing unit multiplexes the MPEG transport streams that are outputted from the channel reproduction unit in accordance with the multiplexing timing that is outputted from the reproduction timing generation unit, and outputs the multiplexed stream (col. 8, lines 32-51), but do not explicitly teach the reproduction ATS generation unit selects one of the ATS values, corresponding to one channel, which are inputted from the ATS detection unit, and outputs a value of a counter which uses the selected ATS as an initial value to the packet rewriting unit, the reproduction timing generation unit, and the multiplexing unit, as well as outputs a difference between the ATS initial value of the

selected channel which is used as the initial value of the counter and an ATS initial value of other channel to the reproduction timing generation unit.

Svanbro et al. teach the reproduction ATS generation unit selects one of the ATS values, corresponding to one channel, which are inputted from the ATS detection unit, and outputs a value of a counter which uses the selected ATS as an initial value to the packet rewriting unit, the reproduction timing generation unit, and the multiplexing unit, as well as outputs a difference between the ATS initial value of the selected channel which is used as the initial value of the counter and an ATS initial value of other channel to the reproduction timing generation unit (claim 8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the known technique of determining a difference between the ATSs to improve the device taught by Lenihan et al. to estimate the stream inactivity.

However, Lenihan et al. and Svanbro et al. do not explicitly switching between programs.

Ohara et al. teach a common set-top box that recognizes timing its user switching between programs from his or her operation of a keyboard ([0014]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a set-top box that recognizes timing its user switching between programs to recognize the timing of the discontinuity of the data.

Consider claim 2, Lenihan et al. teach the image reproduction apparatus wherein the reproduction timing generation unit generates a timing such that a reproduction time interval between a Presentation Time Stamp (PTS) and a Decoding

Art Unit: 2621

Time Stamp (DTS) of an arbitrary video/audio channel, which are included in the MPEG transport stream outputted from the multiplexing unit, becomes equal to a time interval between a PTS and a DTS in a MPEG transport stream of the original images (col. 16, lines 10-25).

Consider claim 3, Ohara et al. teach the image reproduction apparatus wherein the packet rewriting unit further has a function of rewriting a stream, thereby controlling a buffer in a decoding apparatus ([0068]-[0070]).

Consider claim 4, Ohara et al. teach the image reproduction apparatus wherein the packet rewriting unit rewrites a stream by rewriting vbv_delay in a MPEG video stream ([0070]-[0071]).

Consider claim 5, Ohara et al. teach the image reproduction apparatus wherein the packet rewriting unit further has a function of rewriting a coding parameter of a video/audio stream, and monitors a code amount of a video/audio stream in a MPEG transport stream at the reproduction, thereby optimizing the code amount ([0041], [0042], and [0069]).

Consider claim 7, Ohara et al. teach the image reproduction apparatus wherein a reproduction control signal for informing switching of video between arbitrary channels is inputted to the reproduction timing generation unit ([0014]), and the reproduction timing generation unit generates timing of multiplexing of MPEG transport streams for correcting discontinuity in the Arrived Time Stamp resulting from the channel switching in accordance with the reproduction control signal ([0047]).

3. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenihan et al. (US 6,169,843 B1) in view of Svanbro et al. (US 6,680,921 B1) and Ohara et al. (US 2001/0041060 A1) as applied to claim 1 above, and further in view of McLaren (5,867,625).

Consider claim 17, Lenihan et al., Svanbro et al., and Ohara et al. teach all the limitations in claim 1 but do not explicitly teach the image reproduction apparatus further including: a trick-play control unit and a trick-play picture generation unit, said trick-play control unit transmitting a transmission band that is allocated to trick play and trick-play control information to the trick-play picture generation unit, and said trick play picture generation unit generating trick-play video/audio on the basis of outputs from the buffer using the transmission band and the control information which are transmitted from the trick-play control unit, and transmitting the generated video/audio to the packet rewriting unit.

McLaren teaches the image reproduction apparatus further including: a trick-play control unit (90 of Fig. 1) and a trick-play picture generation unit (145, 160, and 170 of Fig. 1), said trick-play control unit transmitting a transmission band that is allocated to trick play (90 of Fig. 1 transmits a control signal to 100 to extract and process trick-play data) and trick-play control information to the trick-play picture generation unit (111, the trick play control signal is sent to the trick play generation units, 145, 160, and 170 in Fig. 1), and said trick play picture generation unit generating trick-play video/audio on the basis of outputs from the buffer using the transmission band and the control information which are transmitted from the trick-play control unit (the trick play stream

units generate trick play stream on the basis of the input of the I-Frame memory in Fig. 1), and transmitting the generated video/audio to the packet rewriting unit (Fig. 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a trick play generation device to generate trick play stream in a real-time manner.

Consider claim 18, McLaren teaches the image reproduction apparatus wherein the trick-play control unit changes the transmission band that is allocated to the trick play also in a period when the trick play is being performed (col. 3, lines 42-59, the user is able to change the reproduction speed), and the trick-play picture generation unit generates trick-play pictures on the basis of the transmission band that is transmitted from the trick-play control unit (col. 3, lines 42-59, the reproduction speed produced is on the basis of the input from the user).

Allowable Subject Matter

4. Claims 6, 8, 9-16, and 19-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAT CHI CHIO whose telephone number is (571)272-9563. The examiner can normally be reached on Monday - Thursday 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571)-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. C. C./
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621